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The purposes of this investigation were to determine whether differences in creative ability exist between white and Negro students, between public and parochial school students, between students of different grade levels, and between sexes. A corollary purpose of this study was to determine how well teachers can identify the creative students in their classes by personal contact and by observation. A total of 600 students in grades four, seven and twelve were given the California Test of Mental Maturity and the Torrance Tests of Creative Thinking. The teachers involved with these students were asked to select the five most and the five least creative students in their classes. Significant differences were shown between grades four and twelve, favoring the higher grades. Public school students were more creative than parochial students. No significant differences were found between Negro and white students, between grades seven and twelve, or between the sexes. Results indicate teachers are not able to identify creative students. (Author/KJ)

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FINAL REPORT
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AN ANALYSIS OF DIFFERENCES IN CREATIVE ABILITY BETWEEN WHITE AND NEGRO STUDENTS, PUBLIC AND PAROCHIAL, THREE DIFFERENT GRADE LEVELS, AND MALES AND FEMALES

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June 13, 1969

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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Final Report

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An Analysis of Differences in Creative Ability Between White and Negro Students, Public and Parochial, Three Different Grade Levels, and Males and Females

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June 12, 1969

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Contents

Summary ---------- 1

Introduction ---------- 2

Methods ---------- 4

Findings and Analysis ---------- 4

Conclusions and Recommendations ---------- 14

References ---------- 16

Appendixes

AI Torrance Tests of Creative Thinking - Figural Form ----- 18
AII Torrance Tests of Creative Thinking - Verbal Form ----- 19
B List of White and Negro Students on Comparison I -------- 20
BII List of Public and Parochial Students on Comparison II ---------- 22
BIII List of Three Grade Levels on Comparison III --------- 23
BIV List of Male and Female Students on Comparison IV ----- 24
C Description of Creative Person ---------- 25
D Teacher Evaluations of Creativity Form ---------- 26

Tables

1 F Ratios for ANOVAs for Comparison I ---------- 6

2 F Ratios for ANOVAs for Comparison II ---------- 7

3 F Ratios for ANOVAs for Comparison III ---------- 9

4 F Ratios for ANOVAs for Comparison IIIA ---------- 10

5 F Ratios for ANOVAs for Comparison IV ---------- 12

6 Pearson Product-Moment Correlations Between Teacher Ratings and Creativity Test Scores ---------- 13

Summary

The purposes of this investigation were to determine whether differences in creative ability exist between white and Negro students, between public and parochial school students, between students of different grade levels, and between sexes. A corollary purpose of this study was to determine how well teachers can identify the creative students in their classes by personal contact and by observation. Initially, 600 students in grades 4, 7, and 12 were administered the California Test of Mental Maturity. Then the groups were matched on the basis of their IQ scores for the four comparisons inherent in the study. Following, 272 students were administered Form A, Figural and Verbal sections of Torrance Tests of Creative Thinking. Furthermore, each teacher whose students were in the study was asked to select the five most creative and the five least creative students in his class. Pearson Product-Moment correlations were run between teacher-selections of five highs and five lows and these same subjects' creativity test scores.

Analyses of variance were run on each of the four comparisons to determine significance level between white and Negro students, public and parochial school students, students of three different grade levels and between males and females. There were no significant differences between white and Negro students. Significant differences were found between public and parochial school students, with the public school students being more creative ($P < .01$). Significant differences were found between 4th and 7th grade and between 4th and 12th grade ($P < .01$), with each comparison favoring the higher grade. No significant differences were observed between 7th and 12th grade students. Likewise, the differences between sexes were not significant. The correlation between teacher ratings and student scores on the creativity tests for all of the groups combined was .024, suggesting that teachers are not capable of identifying creativity in students.

Introduction

The major purpose of this investigation was to ascertain whether differences in creative abilities exist in students of varying cultures, ages, and sexes, and further, to ascertain whether parochial school students or public school students are more creative. A corollary to the specified objectives of this study was to determine how adequately teachers can identify creative ability in their students by personal contact and by observation.

Some of the major issues in creativity have been investigated quite thoroughly. Certain basic premises are presently accepted; however, with further investigation, some of the purported truths regarding creativeness may be clarified, substantiated, and in some cases, repudiated. There are certain other areas of creativity which have received very little attention. The purpose of this study was to add to the dearth of knowledge that we currently have in some of the areas of creativity.

Four major hypotheses were proposed. In each respect comparisons of students were made to determine whether there are significant differences in creativity between particular groups.

Sociologists and psychologists tend to agree that lower-class parents are more permissive than the middle-class parents. Kohn (1965) has shown that middle-class parents have become more permissive in recent years and that the gap between social classes seems to be narrowing. Similarly, Havighurst and Davis (1955) suggest that middle-class children are being allowed more freedom of movement from home than in previous years. Torrance (1964) has shown that differences in creativity between Negroes and whites exists. Consequently, since Negroes are frequently associated with the more permissive lower-class, this researcher hypothesized that Negroes would be more creative than whites.

A sizeable segment of our school population is found in parochial schools. Classroom practices generally differ between parochial and public schools, but does one system encourage creative thinking to a higher degree than another system? This researcher hypothesized that students attending public schools will be more creative than students in the parochial school system.

Torrance (1963) has found that there is a changed and diminished originality response of American boys and girls at the fourth grade level and then again at the seventh grade level. This might suggest that these two ages are plateau periods and that from this point students become progressively poorer in creative responses. A comparison between students of grades 4, 7, and 12 was to be made and it was predicted that students in grade 4 would be most creative, seventh graders would be second, and that twelfth graders would be least creative.

The controversy over superiority of sexes in relation to intelligence has been satisfactorily resolved. However, there are differences in opinion as to which sex group is more creative. Gallagher (1964) seems to suggest that girls are less creative than boys while Osborn (1963) writes that women's creative aptitude averaged as much as 25 per cent higher than that of men. Torrance (1963) contends that scientific research on the question of relative creativity of sexes is inconclusive. Torrance (1965) further points out that the superiority of one sex over the other, depends upon age, educational level, and nature of the task. Therefore, with uncertainty, this researcher elected to take the position that male students would be superior to female students in creative productions.

Williams (1966) indicates that unless teachers are trained in what they are looking for, they are unable to identify their most creative students. It is felt by some that teachers might discriminate against race, cultural background, manner of dress, and personality. Williams (1965) suggests that unless teachers are prepared to be discerning in their observations, it is not likely for biases to enter in when they are being asked to rank their students on creativity. In order to learn how perceptive teachers are in identifying their creative students, this researcher asked the teachers who participated in the study to select the five most creative and the five least creative students in their classes. After assigning quantitative values to the rank order that teachers gave to each of their students, these converted scores were then correlated with the actual creativity scores of the students in the study.

The significance of this study is in effecting changes in known and assumed knowledge relative to creativity. Results of some studies in the area of creativity are somewhat unreliable and

limited. This study does provide replicated as well as much needed new information on this subject. Information received from the analysis of this data should suggest some changes in the conceptual framework of creativity as well as changes in the curricula and in techniques of instruction.

Methods

A total of 600 students of grades 4, 7, 12 from eight different schools in Wisconsin and Michigan were randomly selected for the study. The California Test of Mental Maturity, Levels 2, 3, and 4, a group IQ test, was administered to the total population. From this population, 272 Ss were extracted and equated on the basis of IQ scores and were then administered the Torrance Tests of Creative Thinking, Form A, both figural and verbal forms (Appendix A). In every instance the student-to-student matching varied no more than one IQ point (Appendix B). While the creativity tests were being administered by the researcher and his assistant, or shortly after the testing period, each participating teacher was given a one-page description of a creative person (Appendix C) with the appended Teacher Evaluation of Creativity form and was asked to list the children they felt were most and least creative in fluency, flexibility, originality, and elaboration (Appendix D).

The IQ tests were hand-scored and IQ scores were derived from the Mental Age Tables provided in the Examiner's Manual of the California Test of Mental Maturity. The creativity tests were scored and graded by Personnel Press Services.

Two statistical techniques were utilized in the analysis of data: analysis of variance and Pearson Product-Moment correlation. Analysis of variance was used in determining significant differences between equated groups (See Tables 1, 2, 3, 4, 5) and the correlational technique was employed to determine the degree of relationship between teacher ratings of observed creativity in students and the actual scores obtained on the creativity tests (Table 6).

Findings and Analysis

Analysis of variance was computed on each of the four comparisons implicit in the hypotheses to determine whether significant differences existed between white and Negro students, between public and parochial school students, between students

of three different grade levels (4, 7, 12), and between males and females. Pearson Product-Moment correlations between teacher-ratings and students' creativity test scores were computed to determine how adequately teachers can identify creative ability of students in their classes.

Table 1 lists the F ratio emanating from the first comparison between white and Negro students. Along with the analysis of variance summary, the means and comparisons between grades are recorded. In Table 1 it will be noted that the difference between white and Negro students was not significant. However, grade-wise, significant differences were found between grades 4 and 7 and also between grades 4 and 12. The lack of significant differences between whites and Negroes rejects Hypothesis I which states that Negro students would be more creative than white students. On the other hand, this discovery helps to support the notion that every individual, regardless of color of skin, possesses creative potential. Evidently, the cultural surroundings for one race is not so different from another race when considering creative productions.

Table 2 lists the F ratio derived from the comparison between public and parochial school students and their performance on the creativity tests. Table 2 reveals a significant difference between public and parochial school students ($p < .01$), favoring the public school students. Again significant differences in creativity at the .01 level were found between grades 4 and 7 and between grades 4 and 12; the difference between grades 7 and 12 was insignificant.

Hypothesis II was supported by this study. The results indicate that there is a significant difference in creative performance between public and parochial school students, favoring public school students. The acceptance of this hypothesis may suggest that the philosophy of parochial school education is different from public school education and that the psychological approaches to teaching, learning, and classroom behavior, in general are different from those in the public schools. It may further suggest that the public school system encourages creative thinking to a higher degree than another system. Many parochial educators would agree that freedom of expression in the parochial classroom is more subdued than in the public school. There is a greater acceptance of the authority figure and his claims and demands in the parochial classroom than in the public system, although changes in structure and

Table 1

F Ratios for ANOVAs: Comparison I
(Whites vs. Negroes)

Means

	White	Negro
4th Grade	36.71	36.16
7th Grade	39.52	47.19
12th Grade	42.38	45.72

ANOVA Summary

Source of Variation	D.F.	Mean Square Deviation	F	Significance of F
Grades	2	646.81	6.21	$p < .05$
Race	1	331.91	3.19	Not Sig.
Interaction	2	154.15	1.48	Not Sig.
Error	117			

Comparisons between Grades

4th vs. 7th	$F = 8.38$	$p < .01$
4th vs. 12th	$F = 10.15$	$p < .01$
7th vs. 12th	$F = 0.08$	Not Sig.

Table 2

F Ratios for ANOVAs: Comparison II
(Public vs. Parochial)

Means

	Public	Parochial
4th Grade	33.52	34.66
7th Grade	57.86	42.47
12th Grade	55.80	45.88

ANOVA Summary

Source of Variation	D.F.	Mean Square Deviation	F	Significance of F
Grades	2	1849.56	13.25	p <.01
Schools	1	1001.52	7.18	p <.01
Interaction	2	364.72	2.61	Not Sig.
Error	56	139.55		

Comparisons between Grades

4th vs. 7th	F = 19.04	p <.01
4th vs. 12th	F = 20.67	p <.01
7th vs. 12th	F = 0.03	Not Sig.

philosophy in the parochial schools toward a more liberal approach are evident, especially in the last decade. A factor which cannot be disregarded is the home environment of parochial students and its influence upon the expression or suppression of creative thinking. Children reared in a democratic home will be more expressive in their ideas than those children who come from a more autocratic home. It is possible that parents who enroll their children in parochial schools are prone to discourage creative expression by their children. Hence, when discussing differences in creative production, it is necessary to consider, not only the school and its psychological environment but also the home and its philosophical orientation.

Table 3 shows a significant difference between the three grades (4, 7, 12) represented in this study ($p < .01$). Therefore, Hypothesis III is accepted, but only in respect to differences between the three grades (4, 7, 12). Unlike previous findings, the fourth grade students were not the most creative. On the contrary, they were the least creative. As is noted by the means in Table 3, students in grade 7 performed significantly better than fourth graders. Likewise, twelfth-grade students did significantly better than students in grade 4. No significant differences were observed between seventh-and twelfth-grade students.

Since high F ratios exist between fourth and seventh graders and between fourth and twelfth graders, all favoring the upper grades, an attempt will be made to explain this occurrence. Previous research findings as well as empirical evidence dictate a reversed position; fourth graders tend to be most creative while senior high students are least productive in creative thinking tasks. Several plausible reasons can be proffered. It is possible that the sample used might have been unique, consequently, the performance observed by testing might be atypical. Secondly, this population might have less facility in written expression than another group of students in each representative grade. This second phenomenon has merit, since significant differences were not observed between the three grades when F ratios were computed on the non-verbal scores only. Table 4 shows that differences between grades were insignificant on the Figural, Form A Torrance Tests of Creative Thinking. Still another possibility, although remote, is that fourth graders have not mastered the written skills in verbalizing their creative percepts and concepts and hence, the free expression that is observed when the child reminisces, is

Table 3

F Ratios for ANOVAs: Comparison III
(Grade 4 x Grade 7 x Grade 12)

Means

4th Grade	35.53
7th Grade	50.82
12th Grade	48.44

ANOVA Summary

Source of Variation	D.F.	Mean Square Deviation	F	Significance of F
Grades	2	2173.83	12.81	p <.01
Error	94	169.67		
Total	96	211.42		

Comparisons between Grades

4th vs. 7th	F = 22.07	p <.01
4th vs. 12th	F = 15.97	p <.01
7th vs. 12th	F = 0.54	Not Sig.

Table 4

F Ratios for ANOVAs: Comparison IIIA
(Grade 4 x Grade 7 x Grade 12)
Figural Scores Only *

Means

4th Grade	39.35
7th Grade	44.64
12th Grade	42.24

ANOVA Summary

Source of Variation	D.F.	Mean Square Deviation	F	Significance of F
Grades	2	217.49	1.22	Not Sig.
Error	90	177.95		Not Sig.
Total	92	178.81		

*Table 4 has F ratios between three grades (4, 7, 12) for figural scores only.

lost when these concepts need to be recorded in written symbolic form. As it appears now, a definitive statement regarding grade placement and creative productions will evolve only after this aspect of creativity is researched more thoroughly.

Table 5 reveals no significant differences between males and females; thus Hypothesis V, which stated that males are more creative than females, is rejected. Again, there were significant differences between grade 4 and grade 7 as well as between grade 4 and grade 12. No significant differences were found between seventh graders and twelfth-grade students.

It appears that superiority in creative thinking of one sex over another is a moot question. As further evidence is obtained from research it may be more appropriate to make qualifying statements in which one accounts for age, educational level, occupational classification, the nature of the task, and perhaps many other variables. It is a well-established principle that males are not superior to females in IQ or vice versa. Likewise, it appears that the sex of an individual has no significant bearing on creativity.

A corollary to the specified objectives of this study, yet a very important issue in the field of education is the question of how adequately teachers can recognize creative ability in their students. As has been suggested earlier, teachers are inaccurate in identifying the creative students in their classroom unless they have special training and preparation in being discerning in their observations.

Table 6 reinforces the contention that teachers are poor judges of creative expression in their student body. From the correlational Table, one notes that the relationship between teacher ratings and student scores on the creativity tests for all of the groups combined is very low (r=.024). The same was true of individual classrooms; there was no significant correlation observed.

Can teachers become more perceptive and more scrutinizing in their observation of divergent and convergent performances in their pupils? Other writers suggest that such capabilities can be developed through a lengthy training period. Obviously, a

Table 5

F Ratios for ANOVAs: Comparison IV
(Males vs. Females)

Means

	Males	Females
4th Grade	29.64	35.58
7th Grade	52.23	55.99
12th Grade	45.01	47.79

ANOVA Summary

Source of Variation	D.F.	Mean Square Deviation	F	Significance of F
Grades	2	2287.72	15.45	p<.01
Sex	1	250.10	1.69	Not Sig.
Interaction	2	12.58	0.08	Not Sig.
Error	52	148.04		

Comparisons between Grades

4th vs. 7th	F = 30.10	p <.01
4th vs. 12th	F = 12.38	p <.01
7th vs. 12th	F = 3.87	Not Sig.

Table 6

Pearson Product-Moment Correlations
Between Teacher-Ratings and Creativity Test Scores

Schools	r Teacher-Rating and Test Score
Lutheran Grade - Oshkosh	-0.028
Lutheran Grade - Milwaukee	-0.329
Catholic Grade - Milwaukee	-0.198
Catholic High - Milwaukee	-0.020
Public Grade - Ripon	-0.028
Public Jr. High - Ripon	0.170
Public Sr. High - Ripon	0.065
Public Sr. - Flint	0.145
All Schools Combined	0.024

one-page description of a creative person handed to a teacher-rater does not constitute adequate preparation.

Conclusions and Recommendations

Creativity test scores were obtained and analyzed on 272 fourth-, seventh-, and twelfth-grade students. The experimental design of this investigation required matching students from three grade levels according to the four hypotheses that were established in the study. In Comparison I, white students of three different grade levels (4, 7, 12) were matched with their Negro counterparts; it was hypothesized that Negroes would be more creative than whites. In Comparison II public school students were matched against parochial school students; all three grade levels were included. It was hypothesized that public school students would be more creative than their parochial school counterparts. Comparison III was made to determine whether differences in creativity existed between students in grades 4, 7, and 12. Hypothesis IV was established with a prediction that males would be more creative than females. Thus, in Comparison IV male students of grades 4, 7, and 12 were matched against females of the same grades.

In each experiment students of the same IQ were matched against each other for a particular comparison. Also, the means of total groups were alike. Analysis of variance was computed for each of the four major comparisons. The product-moment correlation was utilized to determine the relationships between teacher ratings and the actual creativity test score.

The results from this investigation are as follows:

a. There were no significant differences in the creativity scores between white and Negro students.
b. Public school students were significantly more creative in their performance on the tests than their parochial school counterparts ($p < .01$).
c. Significant differences in creativity were found between the three grade levels ($p < .01$). Both seventh and twelfth grade students were significantly more creative than fourth grade students. Differences between seventh- and twelfth-graders were insignificant. Since earlier researchers have found fourth graders to be more creative than students of higher grade levels, analysis of variance was computed on only the figural scores; this time there

were no significant differences found between the three grade levels.

d. There were no significant differences between the creativity scores of males and females.

Briefly, this research supplied new and additional information to four specific areas of creativity. The assumption that Negroes are more creative than whites was not supported in this study. It is possible that the culture and environment of both races is similarly conducive to the development of creative productions. Public school students manifest more creativity than parochial school students. With changes in parochial education, it is possible that these differences will disappear. Students at different grade levels displayed different amounts of creativity. Contrary to previous findings, the fourth grade students in this investigation were least creative in the total expression of creative productions. Males showed no significant differences in creative thinking from female students.

Subject to the usual restraints on generalizing from a limited population, it appears that there are some logical conclusions that have evolved from this research. For the time being, it can be said that whites and Negroes as well as males and females are no different from each other in creativity. Public school students manifest more creativity than parochial school students. Certainly, more research on comparying creativity of different grade levels appears to be warranted.

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Appendix A

Appendix A consists of both the Figural and Verbal, Form A, Torrance Tests of Creative Thinking which were used in assessing creative performance in this study. These two tests follow on the succeeding pages.

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Appendix B

This appendix contains the first names of the students and their I.Q. that were matched for each of the four comparisons. Appendix BI consists of students who were matched by race.

White		Negro	
Name	I.Q.	Name	I.Q.
Tom	86	Glenda	87
Jimmie	83	Alberta	83
Catherine	79	Sammy	80
C.E.A.	95	Harman	96
S.E.F.	103	Glenda	103
D.A.G.	115	Chatmon	115
K.R.G.	108	Hershel	108
Treca	90	Harold	90
P.R.B.	102	Winona	102
V.W.F.	94	Alma	95
G.S.B.	90	Janice	90
L.D.H.	99	Janet	99
H.B.B.	116	Edward	116
G.F.G.	103	Edward	104
J.L.G.	98	LuJuan	97
J.A.H.	103	Alma	103
K.M.C.	99	James	100
J.M.B.	103	Dwayne	102
Sally	108	Mitchel	108
C.A.D.	91	Maurice	90
M.W.B.	87	Willie	88
D.L.G.	94	Gloriet	95
Glenn	89	Brenda	89
B.M.D.	92	Gayle	91
D.K.G.	101	Charles	101
P.J.B.	100	Patricia	101
A.D.G.	87	Leola	88
Jeannie	76	Paul	76
Edward	76	Russell	76
Tressa	77	Leroy	76
Gerald	82	Alvin	81
Greg	75	Carolyn	75
Mike	78	Debra	78

White		Negro	
Name	I.Q.	Name	I.Q.
Lauraen	95	Malcolm	95
Charles	99	Juan	99
James	100	Michael	100
Corine	100	Tarsha	100
Kevin	101	Nancy	101
Melinda	108	Torrence	108
Ricky	110	Brenda	110
Philip	119	Mary	119
Mary	121	Rhonda	120
Mary	125	Kent	125
Patricia	107	Jay	107
Paul	89	Venus	89
Mary	81	John	81
Gail	83	Sharon	82
Norma	90	Gail	90
Craig	94	Marvin	95
Debra	95	Brenda	95
Katherine	99	Michael	99
Sandra	99	Rory	99
Sue	98	Gwli	99
Robe[illegible]	100	Kristie	100
Sand[illegible]	107	Charles	107
Mary	109	Paulette	109
Paul	110	Clyde	110
Robert	113	Sheryl	113
Jayne	114	Toni	114
Andrew	115	Linda	114
Terri	120	Pauline	120
John	127	John	128

Appendix BII

Appendix BII contains the names of students who were matched by Public and Parochial Systems

Public		Parochial	
Name	I.Q.	Name	I.Q.
Deborah	111	W.J.B.	111
Christine	117	Gregory	116
Patricia	124	Anthony	124
Babette	104	George	104
Bob	116	Kathleen	117
Steve	108	Marguerite	108
Rhonda	109	Michael	108
Patti	120	John	119
J.M.C.	105	James	105
Elroy	115	Mike	116
Feakes	98	Michael	99
Erika	112	Robert	113
Michael	113	Wendy	112
Randy	110	Paul	110
Fred	109	Mary	109
Valerie	120	Pauline	120
Robert	130	Cynthia	131
Katherine	124	Gene	124
Mark	118	Anna	118
Betsy	107	Charles	107
Yvonne	107	Jay	107
Richard	119	Rhonda	119
Kevin	108	Steven	107
Randall	122	Mary	121
Jeffrey	95	Lauraen	95
Brian	97	Michael	96
Timothy	120	Mary	119
Wendell	102	Steven	102
Ronald	106	David	106
Gregg	100	Velaine	101
Susan	101	Corine	100
Annette	132	Philip	131

Appendix BIII

This appendix contains the names of three different grade levels and their IQ score.

Grade 4		Grade 7		Grade 12	
Name	I.Q.	Name	I.Q.	Name	I.Q.
Mary	121	Pauline	120	John	120
Mary	119	Mary	119	James	119
Philip	131	Cynthia	131	Ruth	130
Kent	125	Debbie	125	Barbara	124
Laura	125	Jon	125	Sylvester	126
Mary	125	John	125	Patricia	124
Jeff	124	Gene	124	Donna	125
Joan	124	Katherine	124	Anthony	124
Antonette	128	Robert	129	Robert	129
Heidi	128	John	128	Jacqueline	128
Robert	128	John	127	Bob	128
Ronald	106	Mark	106	J.M.C.	105
David	106	R.P.H.	106	James	105
D.E.S.	111	Ken	111	D.J.P.	111
S.D.D.	118	Anna	118	Mike	117
Mike	118	Cathy	118	M.C.V.	118
Douglas	117	Connie	117	K.M.K.	117
Rhonda	117	J.A.D.	116	G.J.S.	116
Marsha	116	Nancy	116	Christine	117
Timothy	120	Terri	120	Jeffrey	119
Lori	120	Joy	121	Patti	120
Debra	120	V.A.K.	120	Thomas	120
D.K.H.	120	S.M.H	121	Cynthia	121
J.M.O.	107	Judith	108	Rafael	108
P.A.H.	107	Sandra	107	M.A.K.	108
Yvonne	107	Charles	107	R.L.K.	108
S.I.G.	107	Betsy	107	M.P.K.	108
Mark	107	Barbara	107	Larry	108
Jim	102	Danny	102	G.J.L.	103
John	96	D.A.A.	95	D.L.G.	95
J.K.H.	97	Sherry	97	Lujuan	96

Appendix BIV

Appendix BIV includes the first names and the students' IQs matched according to sex.

Male		Female	
Name	I.Q.	Name	I.Q.
Jeff	124	Joan	124
Robert	128	Heidi	128
Scott	111	Dawn	111
Doug	117	Marsha	116
Timothy	120	Lori	120
Mark	107	Patricia	107
Steven	107	Yvonne	107
Brian	97	Anita	97
Chris	136	Cynthia	137
Jesse	133	Annette	132
Robert	113	Sheryl	113
Howard	115	Nikki	115
David	117	Connie	117
Mark	118	Debra	119
Robert	130	Peggy	131
Gene	124	Katherine	124
John	116	Nancy	116
Steve	121	Valerie	120
Charles	107	Betsy	107
Michael	99	Sherry	98
Bruce	103	Delores	103
Jim	114	Daren	114
David	112	Diana	112
David	110	Cindy	110
George	104	Babette	104
Anthony	124	Patricia	124
John	111	Deborah	111
Michael	118	Kathleen	117
Thomas	120	Patti	120
Michael	108	Marguerite	108

Appendix C

This appendix is a facsimile of the one-page description of a creative person. It was attached to the Evaluation form as represented in Appendix D.

Dear Teacher,

To help you identify the most creative and least creative students in your class, a paragraph describing a highly creative person follows. This then should help you answer the four major questions on the Teacher Evaluations of Creativity form that is attached.

WHO IS A CREATIVE PERSON?

A creative person has many "faces". He is very energetic, determined, curious, and is not afraid of being different. Thus he will think of the most unusual, wild, or fantastic ideas in both constructive and destructive activities. Furthermore, he will be determined to live with his convictions even under great pressure from teacher and students alike. He will be intuitive and independent in his thinking and judgments. Again he may be all alone on some decisions but he will frequently advance another plan or idea when the planned activity for class becomes nonfunctional. The creative accepts disorder and lacks business ability, hence his desk and his work may be untidy; he may be careless about his dress and grooming. Frequently he will be unpopular because of his nonconformity and self-assertiveness. Often he will question the ordinary, matter-of-fact responses.

Appendix D

Appendix D is a facsimile of the Teacher Evaluations of Creativity form which was completed by each teacher whose students were tested in the project.

TEACHER EVALUATIONS OF CREATIVITY
Taken from Torrance Manual

Teacher _____ Grade _____

School _____ Date _____

1. Which children in your class are the most fluent in the production of ideas? These are children who seem to be "just running over with ideas," though not always the most talkative. Some of their ideas may not be of high quality.
   (1)
   (2)
   (3)
   (4)
   (5)

   Which are the least fluent?
   (1)
   (2)
   (3)
   (4)
   (5)

2. Which children in your class are the most flexible in their thinking and in the production of ideas? When one plan or procedure fails, they come up immediately with a different approach. They employ a variety of strategies or approaches in solving problems. They readily abandon unproductive approaches although they do not abandon the goal; they simply find some other way of achieving the goal.
   (1)
   (2)
   (3)
   (4)
   (5)

Which are the least flexible?
(1)
(2)
(3)
(4)
(5)

3. Which children in your class are the most original in their thinking? They are able to get away from the obvious and the commonplace and break away from the beaten path. They see relationships and think of ideas and solutions which are different from others in the class and from the textbook. Many, though not all, of their ideas prove to be useful. Some of their ideas are quite surprising, though true.
(1)
(2)
(3)
(4)
(5)

Which are the least original?
(1)
(2)
(3)
(4)
(5)

4. Which children in your class are the best in elaborating ideas? They are able to take an idea or a task and spell out the detail. They can take a simple idea and "embroider" it or make it fancy and attractive. Their drawings are very detailed and they are able to develop very detailed or thorough plans for projects.
(1)
(2)
(3)
(4)
(5)

Which are the least able to elaborate?
(1)
(2)
(3)
(4)
(5)